



Research article

Medical research

Differences in The Event of Dental Caries in Public Elementary School Students Based on The Role of Parents in Dental and Oral Hygiene in The Region of Public Health Center II Kerambitan Tabanan

Ni Nyoman Dewi Suparini¹, Sagung Agung Putri Dwiastuti¹, I Gusti Ayu Raiyanti¹, I Nyoman Wirata¹, I Gede Surya Kencana¹, Anak Agung Sagung Dyah Karuniadewi²

¹Dental Nursing Department, Health Polytechnic, Ministry of Health, Denpasar, Indonesia

²Faculty of Dentistry, Universitas Airlangga, Indonesia

Corresponding Author: Ni Nyoman Dewi Suparini
Email: dewisupariani66@gmail.com

ABSTRACT

Dental caries is common in children because children tend to prefer sweet foods that can cause dental caries. Parents play an important role in guiding and disciplining children to practice maintaining oral health by brushing teeth properly and correctly. The purpose of this study was to determine the difference in the incidence of dental caries in elementary school students based on the role of parents in dental and oral hygiene at the Public Health Center II Kerambitan Tabanan. This research is an observational research with a cross-sectional design. The sampling technique was done by Proportional Random Sampling, using the formula from Murti as many as 120 people. Data analysis using Bivariate analysis using one way ANOVA test. The results of this study obtained that the highest child dental caries in the moderate caries category was 33 people, while the lowest was in the very low category as many as 21 people. The role of parents in dental and oral hygiene was mostly in the sufficient category, namely as many as 89 people (74.2%) while the least role was less, namely 14 people (11.7%). There is no difference between the incidence of dental caries in Public Elementary School students based on the role of parents in dental and oral hygiene in the Public Health Center II Kerambitan Tabanan area.

Keywords: Dental caries, Elementary school children, The role of parents.

INTRODUCTION

Based on the Household Health Survey, the prevalence of caries in Indonesia reaches 90.05% and this is higher than other developing countries (Depkes RI, 2004). The number of caries sufferers in Indonesia, which tends to increase, is dominated by children aged less than 12 years at 76.2% or 8 out of 10 Indonesian children experience cavities. While in Bali alone the

prevalence of caries is 56.8%. (LIPI, 2009). Tooth decay index per person in Bali is 3.4%, while the highest is in Tabanan District at 5.3%.

According to Machfoeds and Zein Kawuryan (2008), dental caries is common in children because children tend to prefer sweet foods that can cause dental caries. In general, the condition of children's oral hygiene is worse because children eat more food and drinks that cause caries than adults. Children generally like sweets and if

the child eats too much candy and rarely cleans it, then many of his teeth have caries. (Ramadan, 2010).

Person Parents play an important role in guiding and disciplining children to practice maintaining oral health by brushing teeth properly and correctly. In addition to the role of parents, the role of health workers and information media also affects children's knowledge in terms of maintaining oral and dental health. This knowledge affects the behavior of children in brushing their teeth (Notoatmodjo, 2007).

The active role of parents in the development of children is needed when they are still under the age of nine. The active role of parents in question is to guide, provide understanding, remind, and provide facilities to children (Suherman, 2000).

The formulation of the problem in this study is "Are there differences in the incidence of dental caries in elementary school students based on the role of parents in dental and oral hygiene at Public Health Center II II Kerambitan Tabanan.

RESULTS

Table 1: Gender Distribution of Public Elementary School Students in The Region of Public Health Center II Kerambitan Tabanan.

Gender	Frequency	Percentage
Man	57	47.50
Woman	63	52.50
Total	120	100.00

Based on table 1 shows that out of 120 students in Public Elementary Schools in the area of Public Health Center II II Kerambitan, more students are female than male.

Table 2: Frequency Distribution of Dental Caries for Public Elementary School Students in The Region of Public Health Center II Kerambitan Tabanan.

Category Caries	Frequency	Percentage
very high	30	25.0
tall	24	20.0
currently	33	27.5
low	12	10.0
very low	21	17.5
Total	120	100.0

Based on table 2 shows that the highest child dental caries in the medium category is as many as 33 people, while the lowest with the very low category is 21 people.

METHOD

Type and Design of Research

This research is an observational research with a cross-sectional design. This study aims to determine the differences in the event of caries dental health of elementary school students based on the role of parents in dental and oral hygiene in The Region of Public Health Center II Kerambitan Tabanan.

Population and Samples

The sampling technique was carried out by Multi Stage Random Sampling and sampling in each SDN (Public Elementary School) was carried out by Proportional Random Sampling, using the formula from Murti as many as 120 people.

Data Analysis

Data analysis in this study used Bivariate analysis using one way ANOVA test.

Table 3: Frequency Distribution of Parents' Roles in Dental and Oral Hygiene in The Region of Public Health Center II Kerambitan Tabanan.

The role of parents	Frequency	Percentage
Well	17	14.2
Enough	89	74.2
Not enough	14	11.7
Total	120	100.0

Based on table 3, it is known that the role of parents in dental and oral hygiene is mostly in the category of having a sufficient role as many as 89 people (74.2%) while the least role is less, namely 14 people (11.7%).

Table 4: The Event of Dental Caries in Public Elementary School Students Based on The Role of Parents in Dental and Oral Hygiene in The Region of Public Health Center II Kerambitan Tabanan

The role of parents	Caries					Percentage
	ST	T	S	R	SR	
Well	5	1	5	3	3	14.16
Enough	22	18	24	8	17	74.16
Not enough	3	5	4	1	1	11.66
Total	30	24	33	12	21	100.00

Based on table 4, it is known that the role of parents in the moderate category is 89 people with the most children's dental caries being in the moderate category as many as 24 people, while the role of parents in the less category with child dental caries is 14 people and with high caries is five people.

One way ANOVA test results obtained sig 0.634 (> 0.05) which means that there is no difference between the role of parents with good, sufficient and poor categories of dental caries for children of Public Elementary School students in The Region of Public Health Center II Kerambitan Tabanan

DISCUSSION

The results of the study on Public Elementary School students in The Region of Public Health Center II Kerambitan Tabanan showed that 33 people had caries in the moderate category, 30 people had caries in the very high category, 24 people had caries in the high category, 21 people had very low caries and 12 people had low category. These results indicate that most of the students who were examined at the Public Elementary School students in The Region of Public Health Center II Kerambitan Tabanan had caries in their mouths, this was probably due to the fact that children prefer sweet foods that can cause dental caries and foods that are unhealthy and easy to adhere to teeth. And in general, children have not been able to brush their teeth properly and correctly.

This is supported by Machfoedz (2006) that children have not been able to brush their teeth properly and effectively, because brushing their teeth is not easy, especially on sticky food, as well as food residue that is on the tooth surface that is difficult to reach by a toothbrush. The condition of children's oral hygiene is worse because children eat more food and drinks that cause caries than adults, children generally like sweets and rarely clean it, so many teeth have caries (Ramadhan, 2010).

Based on the results of the research on the role of parents in dental and oral hygiene, it shows that most of the roles of parents in dental and oral hygiene with sufficient category as many as 89 people, the role of parents in the good category as many as 17 people and the role of parents in the less category as many as 14 people. This is probably because parents, especially mothers, do not know how to take care of their teeth and maintain their children's dental hygiene regularly, such as brushing their teeth properly, paying attention to their diet and doing regular check-ups at the dental clinic. This is supported by the opinion of Supartini (2002) which states that parents, especially mothers who have multiple roles are often faced with conflicts between their interests and their existence in the family.

Based on the results of the study of differences in the event of dental caries in Public Elementary School students based on the role of parents in dental and oral hygiene at Public Health Center II Kerambitan Tabanan,

the results obtained the most roles of parents in the moderate category were 89 people with the most child dental caries being in the moderate category as many as 24 people, the role of parents in the good category as many as 17 people with the most children's dental caries in the very high and moderate category, and the role of parents in the category less than 14 people with the most dental caries in children with the high category as many as five people. The results of the statistical test with the one way ANOVA test were obtained sig: 0.634 (>0.005) meaning that there was no difference between the incidence of dental caries in Public Elementary School students based on the role of parents in dental and oral hygiene in the area of Public Health Center II Kerambitan Tabanan.

The weakness of this study was that it did not conduct research on the knowledge, attitudes and behavior of Public Elementary School students regarding dental and oral hygiene.

The results of this study indicate that most of the parental roles of students are in the sufficient category and the most children's dental caries is in the moderate category, this is probably due to parents never supervising the way their children brush their teeth, recommending eating fibrous and watery fruits, and recommending brushing teeth before going to bed at night, the active role of parents in the development of children is very necessary when they are still children. Parents, especially mothers who have multiple roles, are often faced with conflicts between work interests and their presence in the family. High and time-consuming work demands often hinder the fulfillment of the need for togetherness in the family, caring for, and raising children. This is in accordance with the opinion of Supartini (2002), Publics that parents are the most important teachers and the first to provide education to their children and are fully responsible for the growth process. The development of a child is influenced by the role of the environment and the role of parents. While the most dental caries in the moderate category were 24 people.

Public Elementary School students do not yet know how to maintain oral hygiene such as brushing teeth. This is in accordance with the opinion of Tarigan (2012), tooth brushing behavior includes routine brushing, frequency

of brushing teeth, time of brushing teeth, brushing techniques and types of toothpaste. Based on the cross table, it can be seen that five parents played a good role but the dental caries of children of Public Elementary School students was very high as many as three people, this was probably due to the parents guiding, giving understanding, reminding, and providing facilities to children, but their children still like to eat food. sweet and attached to the teeth and do not get used to brushing your teeth before going to bed. This is in accordance with the opinion of Dahlan (2008) which Publics that the habit of eating favorite foods and foods that are not liked by children from an early age will carry over into adulthood and be difficult to eliminate. A good diet is very important for the growth and development of children. Almost all foods, including milk, have some type of sugar that can cause tooth decay (Dahlan, 2008).

Green in Notoatmojo (2007) Publics that behavior occurs because of three factors, namely predisposing, supporting and reinforcing. The role of parents is included in the reinforcing factor. This reinforcing factor is not directly related to the degree of health, which in this study is dental and oral hygiene. This study has a weakness that is not examining tooth brushing behavior, because behavior is directly related to health status.

CONCLUSION

Based on the results of the analysis and discussion, it concluded several things as follows:

1. Dental caries in children was the highest in the moderate caries category as much as 27.5%, while the lowest in the very low category was 17.5%.
2. The role of parents in dental and oral hygiene was mostly in the category of "enough" as many as 89 people (74.2%) while the least role was 14 people (11.7%).
3. There is no difference between the incidence of dental caries in Public Elementary School students based on the role of parents in dental and oral hygiene in the Public Health Center II Kerambitan Tabanan.

REFERENCES

- [1] Angela A. 2005. Primary prevention in children at high caries risk. *Maj Ked Gigi Jul*:130-4
- [2] Dahlan, MS. 2008, *Statistics for Medicine and Health*. Edition 5, Jakarta. Salemba Medika, Indonesian Ministry of Health. 2004. *Work Guidelines for Public Health Centers*, volume I. Jakarta: Ministry of Health, Republic of

- Indonesia. Indonesian Ministry of Health. 2009. Handbook of Dental and Oral Health Materials for MCH Activities at Posyandu. Jakarta: Directorate General of Medical Services, Directorate of Dental Health.
- [3] Dodo, JV 2009. Relationship of Knowledge Level of Dental and Oral Nurses with Dental Caries Incidence, (Online). Available : <http://blog.myspace.com>. Accessed August 5, 2016
- [4] Gultom, M. 2009. Knowledge, Attitudes and Actions of Housewives on the maintenance of dental and oral health of their children under five, in Balige District, Toba Samosir Regency, North Sumatra.
- [5] Istikanah, 2012. The role of parents with independent personal hygiene in pre-school children aged 3-6 years, Thesis, STIKES Nahdatul Utama Tuban.
- [6] Kadir, Y, 2015. The relationship between knowledge of children's dental health and caries status of permanent first molars in grades III-V SDIT Ar-Rahmah Tamalanrea.
- [7] Khotimah K, Suhadi P, 2013. Factors related to the incidence of dental caries in children aged 6-12 years at SD N Karangayu 03 Semarang, Available from: URL: <http://www.portalgaruda.org>
- [8] Agency for Health Research and Development. 2013. Basic Health Research. Jakarta: Ministry of Health of the Republic of Indonesia.
- [9] Machfoedz, I. and Zein AY 2008. Maintaining Dental and Oral Health for Children and Pregnant Women. Yogyakarta: Fitramaya.
- [10] Notoatmojo, S. 2007. Health promotion and behavioral science. Jakarta: Rineka Cipta; 2007. 57-68
- [11] Newman. DWA, Huriawati H, 2002. Dorlan Medical Dictionary. Jakarta: EGC.
- [12] Putri MH, Herijulianti E, Nurjannah N. 2009. The science of preventing diseases of hard tissues and dental supporting tissues. Jakarta: EGC; 59-60, 112-120
- [13] Rijal, T, 2016, Paper on dental and oral health in children, Available from: URL: <http://www.sanggarkesehatan.com>.
- [14] Riskesdas. 2013. Main Results of Basic Health Research in Bali Province. Jakarta: Health Research and Development Agency, Ministry of Health, Republic of Indonesia.
- [15] Setiabudi. T, Hardywinoto, 2002. editor. Excellent child with excellent brain, Jakarta: Gramedia Pustaka Utama.
- [16] Silaban, S, Gunawan, PN, Wicaksono, D, 2013. The prevalence of caries in the permanent first molars in children aged 8-10 years at SD Kawangkoan Bawah Village. Journal of e Gigi,
- [17] Soetjningsih, 1995. Child Development. Jakarta: EGC.
- [18] Supartini, Y. 2002. Children's Nursing Concept Textbook, Jakarta: EGC.
- [19] Sriyono, NW 2009. Prevention of Dental and Oral Diseases to Improve Quality of Life. Yogyakarta: UGM
- [20] Rijal, T, 2016. Children's Dental and Oral Health Paper, Available from: URL: <http://www.sanggarsehat.com>.
- [21] Tarigan R, 2015. Dental Caries. Jakarta., ECG.
- [22] Worang, TY, Pangemanan DHC, Wicaksono, DH, 2014, The relationship between the level of knowledge of parents with dental and oral hygiene of children in Kindergarten Tunas Bakti Manado, e-Gigi Journal.
- [23] Yuriastin, E, Prawitasari, D, Dewi ABFK, 2009, Games therapy intelligence for infants and toddlers, Jakarta: Wahyu Media.

How to cite this article: Ni Nyoman Dewi Suparini, Sagung Agung Putri Dwiastuti, I Gusti Ayu Raiyanti, I Nyoman Wirata, I Gede Surya Kencana, Anak Agung Sagung Dyah Karuniadewi. Differences in The Event of Dental Caries in Public Elementary School Students Based on The Role of Parents in Dental and Oral Hygiene in The Region of Public Health Center II Kerambitan Tabanan. Int J of Allied Med Sci and Clin Res 2021; 9(4):725-729.

Source of Support: Nil. **Conflict of Interest:** None declared.